

PATENT CLAIMS

1. A power-operated chuck (1) with clamping jaws (3) that are guided so they can move radially within grooves in a rotating, driven chuck body (2), act on a workpiece (10) to be clamped in the chuck (1) and are in a drivable connection via intermediate elements, for example in the form of wedge hooks (6) or wedge rods, with a clamping piston (4) upon which a hydraulic fluid can act in one or both directions and can move axially within the chuck body (2), characterized in that,

a pressure sensor (41) is installed in the chuck body (2) in order to monitor the hydraulic fluid pressure always existing in one or both of the pressure chambers (7, 8) assigned to the clamping piston (4), the pressure sensor (41) being connected to one or both pressure chambers (7, 8) of the clamping piston (4) via hydraulic fluid channels (42, 43), and that the pressure sensor (41) has a receiver (44) assigned to it which is connected to a unit (45) for evaluating the signals received from the pressure sensor (41).
2. A clamping device (21) with a piston (24) inserted in a cylinder (22) upon which a hydraulic fluid can act in one or both directions and which is in a drivable

connection with a clamping element (30), e.g. a power-operated chuck, either directly or via intermediate elements,

characterized in that

a pressure sensor (41) is installed in the cylinder (22) in order to monitor the hydraulic fluid pressure always existing in one or both of the pressure chambers (27, 28) assigned to the piston (24), the pressure sensor (41) being connected to one or both pressure chambers (27 or 28) of the piston (24) via hydraulic fluid channels (42, 43) and that the pressure sensor has a stationary receiver (44) assigned to it which is connected to a unit (45) for evaluating the signals received from the pressure sensor (41).

3. The power-operated chuck in accordance with Claim 1 or 2,

characterized in that

The signals from the pressure sensor (41) to the receiver (44) are transmitted by means of radio waves emitted by an aerial (49) or inductively with the help of a coupling module (50) attached to the pressure sensor (41).

4. The power-operated chuck in accordance with Claims 1 to 3,

characterized in that

the evaluation unit (45) is connected to the controller of the machine tool (20) assigned to the chuck (1) or the clamping device (21).

5. The power-operated chuck in accordance with Claims 1 to 4, characterized in that the pressure sensor (41) is equipped with batteries (51) in order to supply it with power, or that electrical power is supplied to the pressure sensor (41) inductively via the receiver (44').

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